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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,871	09/01/2000	Takeshi Chujoh	196889US2SRD	7134

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
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ALEXANDRIA, VA 22314

EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/654,871

Applicant(s)

CHUJOH ET AL.

Examiner

Dave Czekaj

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-9,11,12,16,17 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-5, 10, 13-15, and 18-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 6, 7. 6) ☐ Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In figure 1, box 107, the examiner understood "Freme Memory" to be "Frame Memory".

In figure 3, box S203, the examiner understood "Mood" to be "Mode".

In figure 3, box S207, the examiner understood "Background" to be "Background".

In figure 6, box S405, the examiner understood "Nacro" to be "Macro".

In figure 8, the label for box S604 is missing.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 9, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuo et al. (6618439), (hereinafter referred to as "Kuo").

Regarding claims 1 and 9, Kuo discloses an apparatus that derives motion vectors for application in the interpolation of a video signal. This apparatus comprises "determining whether a video signal in a predetermined unit area

represents a background or non-background area acquired by decoding encoded data obtained by compression-encoding" (Kuo: column 9, lines 39-42, wherein the predetermined unit area is the macroblock and the segmentation circuit determines whether the area is a background or motion object area (non-background)) and "determining an area of a moving object from a result of the determination on whether the signal represents a background or non-background area" (Kuo: column 9, lines 39-42, column 14, lines 25-27, wherein the segmentation circuit determines a motion object area (non-background) which is shown to be the white areas in figures 6A and 6B).

Regarding claims 2 and 12, Kuo discloses "determining whether an interest macroblock is a background macroblock or non-background macroblock every frame and determining a moving object on the basis of the determination result as a background" (Kuo: column 9, lines 39-42, wherein the segmentation circuit determines whether the area is a background or motion object (non-background), column 8, lines 60-67, wherein every frame is fed into the segmentation circuit as an input).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-8, 11, 16-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. (6618439), (hereinafter referred to as "Kuo"), in view of Chen et al. (6208693), (hereinafter referred to as "Chen").

Regarding claims 6 and 16, Kuo discloses an apparatus that derives motion vectors for application in the interpolation of a video signal. This apparatus comprises "determining whether a video signal in a predetermined unit area represents a background or non-background area acquired by decoding encoded data obtained by compression-encoding" (Kuo: column 9, lines 39-42, wherein the predetermined unit area is the macroblock and the segmentation circuit determines whether the area is a background or motion object area (non-background)) and "determining an area of a moving object from a result of the determination on whether the signal represents a background or non-background area" (Kuo: column 9, lines 39-42, column 14, lines 25-27, wherein the segmentation circuit determines a motion object area (non-background) which is shown to be the white areas in figures 6A and 6B). However, this apparatus lacks removing non-background macroblocks such as noise and determining a smallest rectangle enclosing area as claimed. Chen teaches that implementing a boundary box allows just the macroblocks inside the box to be processed, instead of processing all the macroblocks in a picture (Chen: column 6, lines 65-67 – column 7, lines 1-2, wherein the boundary box is the smallest rectangle enclosing area). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed

by Kuo and add the boundary box technique taught by Chen in order to obtain an apparatus that operates more efficiently by processing fewer macroblocks.

Regarding claims 7 and 17, Kuo discloses an apparatus that comprises “determining whether a video signal in a predetermined unit area represents a background or non-background area acquired by decoding encoded data obtained by compression-encoding” (Kuo: column 9, lines 39-42, wherein the predetermined unit area is the macroblock and the segmentation circuit determines whether the area is a background or motion object area (non-background)) and “determining an area of a moving object from a result of the determination on whether the signal represents a background or non-background area” (Kuo: column 9, lines 39-42, column 14, lines 25-27, wherein the segmentation circuit determines a motion object area (non-background) which is shown to be the white areas in figures 6A and 6B). Although Kuo fails to show a display for displaying information indicating the area of a moving object, it is inherent that Kuo’s apparatus would contain a display in order to visualize the frames of data.

Regarding claim 8, Kuo discloses “combining information indicating the area of moving object with the reconstructed video to obtain a combined video image” (Kuo: figure 6B, wherein the moving object area, background information, and video data are used to predict a frame for use in a combined video image).

Regarding claims 11 and 20, Chen discloses "determining an ambit including a plurality of unit areas determined as the non-background area and adjacent to one another" (Chen: figures 3 and 4, wherein the unit areas are the macroblocks, the non-background areas are the macroblocks located outside the bounding box, the macroblocks are shown adjacent to one another in figure 4).

Allowable Subject Matter

5. Claims 3-5, 10, 13-15, and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6025879	02-2000	Yoneyama et al.
US-6160848	12-2000	Sivan, Zohar
US-5729295	03-1998	Okada, Hiroyuki
US-5886743	03-1999	Oh et al.
US-6249613	06-2001	Crinon et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


CHRIS KELLEY
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER